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POPULATION AND WAGES.

THE PSYCHO-ECONOMIC CHECK *VS.* THE SO-CALLED INSTINCT OF REPRODUCTION.¹

THE reader who is familiar with the memorable *Essay* of Malthus will not fail to notice the resemblance between some of the ideas here expressed and those contained in that great work. Nor is the resemblance purely accidental; and for whatever opinions I entertain that are really Malthusian I am willing to acknowledge my indebtedness to the bold heretic. I am not, however, his defender, his follower, nor his commentator; and the doctrines presented in this article, whether Malthusian or not, I advance on my own responsibility.

It is an undoubted fact that the human race, like all inferior creatures, has the physiological capacity to produce, and does produce, more individuals than can satisfy the normal wants of existence, *i. e.*, the wants on the satisfaction of which their bodily health and the full development of their lives depend. That an unrestricted exercise of the reproductive power is the source of much suffering is a proposition that can scarcely be controverted; for, children being unproductive members of the community, the means for their support must be subtracted from the generally scanty means that the parents can command; the result being that both parents and children are underfed, poorly clothed and lodged, and fall easy victims to the ravages of disease, both ordinary and epidemic. To this subject I shall revert farther on; but I would remark, in passing, that a numerous family, being a multiplier of wants, compels the workingman to offer his labor for what wages he can obtain, and, by increasing the demand for labor, naturally decreases the price of it.

In former times, to contribute new members to the community was supposed to be one of man's most imperative obligations.

¹ This article was written nearly three years ago. Its statistical data are not later than 1896.

Today, however, owing to various causes, the "propagation of the species" is ceasing to be considered as either a religious or a social duty. With the increasing sense of independence and the equally increasing habits of comfort and of luxury is developing in civilized communities an aversion, not only to overmultiplication, but to multiplication in general. In so far as this aversion is considered as an individual feeling, it may be described as a psychic check to population; and, because it has grown partly out of economic conditions, it may be termed an economic check. The application of this psycho-economic check is becoming the *de facto* solution of the population problem; and, although such a solution is still denounced as a Malthusian heresy, it is one of those solutions that mankind has accomplished "by marching," and that, notwithstanding the accepted dogmas of political economy and Christian ethics, may before long have to be invested with the serious title of "natural law" — as something that simply *is*, whether it ought to be or not.

The correctness of these statements will, I hope, be substantiated in the course of the present discussion.

The increase of population depends, as M. Gustave de Molinari observes, upon the reproductive power of man, upon the exercise of that power, and upon the available means to preserve and develop the fruits of that exercise; and, by implication, the growth of population can be checked only by actual sterility, by a limited exercise of the reproductive power, or by the destruction of the redundant numbers arising from an excessive application of the reproductive power.¹

That the first of these three checks does not exist will be generally admitted; for, although Mr. Spencer's law—that fecundity decreases as organization develops—may be accepted, the diminution of fertility in the human race has not (owing, probably, to a mitigation of the struggle for life) proceeded far enough to establish equilibrium between the demands of the race and the demands of the individual. In other words, it is still *possible* for mankind, no matter how fast the means of

¹ G. DE MOLINARI, *Cours d'économie politique* (2^{me} édition, Paris, 1863), t. I, p. 397.

existence can be increased and improved, to multiply faster than these. There remain, then, the two other checks, in which we at once recognize Malthus' preventive and positive checks.

It is plain, on the one hand, that, if every person married and had as many children as he could have, the immediate effect would be, or tend to be, an enormous surplus of population, whose demands for food could not be met by the best means of production known to our civilization, and must of necessity be kept down by an equally enormous rate of premature death; and, on the other hand, that, by a moderate exercise of the reproductive power, multiplication could take place at such a rate as not to require or to cause the intervention of the positive check—premature death. Between these two theoretically conceivable extremes, both of which are realized in the animal world, there may exist all possible gradations; and, if it is true that we are far from the former, we are, perhaps, equally far from the latter, as is shown by the great mortality still taking place among the lower classes, which are also the more prolific.

Malthus repeatedly insisted on the obvious truth that the poor classes multiply much more rapidly than the rich; and, as might be expected, it is among them that disease and mortality are greater. As early as 1839 Hippolyte Passy called attention to the fact that, from statistical data, it appeared that the number of births per marriage was much larger where, as in the maritime and manufacturing towns, the majority of the people belonged to the working classes. He also found that in Paris the number of births per marriage averaged 1.97 among the rich, and 2.86, or about one more, among the poor; a difference which he ascribed to the greater prudence and foresight prevalent among the wealthy.¹ In 1888 it was estimated by Drysdale that 100 women of Montmartre, the democratic part of the city, had, on an average, 175 children, while in the Champs Elysées, the quarter of the aristocracy, the same number of women had only eighty-six children, or only half as many.² The average birth-rate for 1,000 inhabitants has been estimated to

¹ See ÉDOUARD VAN DER SMISSEN, *La population* (Paris, 1893), pp. 349-53.

² M. G. MULHALL, *Dictionary of Statistics* (London, 1892), s. v. "Births," p. 93.

be: in Paris, 28 among the poor, and 20 among the rich; in London, 35 among the poor, and 25 among the rich; in Naples, between 39 and 50 among the poor, and between 24 and 28 among the rich. Among the richest Parisian classes the average birth-rate per 1,000 is 16.4, and among the poorest classes it goes as high as 38.8.¹ And, if we compare the birth-rates of various countries, we may notice that, broadly speaking, the greatest number of births occur where poverty is greatest, wages lowest, and the death-rate highest.

It is not to be inferred, however, that mortality depends on the birth-rate *alone*, nor that the birth-rate is invariably high where poverty is great. That a great mortality must accompany a high birth-rate in a country where poverty prevails can be regarded as an axiom; and that the birth-rate, and consequently the death-rate, is greater among the poor, is a truth established by actual observation. But it does not follow that the ratio of births to mortality, or of births to wealth, is a constant quantity; nor that, because England has a greater birth-rate than Belgium, it should have also a higher death-rate, or the English laborer be in worse conditions than the Belgian. There is no intrinsic relation of cause and effect between poverty and fecundity; and if a country is in possession of abundant means of existence, its inhabitants can multiply rapidly and yet be relatively prosperous and happy. England, owing to her great manufacturing enterprises, her extensive commerce, and her rich colonies, as well as to her progress in agriculture, is enabled to supply employment and high wages for a great portion of her people; so that, the facilities for supporting a family being proportionably great, and sanitation being considerably advanced, mortality among the working classes, and in the early periods of life, has been very much reduced. The case is simply one of a rapid increase of population following a correspondingly rapid increase of the means of existence. A very important factor influencing the growth of the English population is that, owing to the common language and the similarity of habits, emigration to the United States

¹ F. NITTI, *Population and the Social System* (London and New York, 1894), pp. 154-8.

(without mentioning Canada and Australia) is made exceedingly easy; as, in fact, an Englishman can scarcely regard his emigration to North America as a change of country. The United Kingdom is one of the nations furnishing the greatest per cent. of emigrants, the others being Norway, Sweden, Germany, and Italy: between the years 1877 and 1886 it was ascertained that, on an average, 32.7 per cent. of the natural increase of the British population left their country, mainly for the United States. The proportions for Italy and Germany were 22 and 20, respectively.¹

Leaving all comparison of nations aside, the general fact remains that overmultiplication takes place especially among the poor; and, as mortality is ordinarily greatest among children, it must be, and is, greater in the lower than in the higher classes of all communities. The cause of this excess is twofold: in the first place, there being many children among the poor, disease will be more common; and this is one reason for their greater absolute mortality; in the second place, the poor having at their command very few means to either prevent or combat disease, their hygienic conditions and their habits being very favorable to sickness of all kinds and to the spread of epidemics, disease is necessarily more fatal among them; and this accounts for their greater relative mortality. To what extent the unavoidable neglect of children influences mortality among the poor can be approximately judged from estimates made by Professor Conrad. According to him, of every 1,000 persons who die in the working classes 479, or about 50 per cent., die during the first five years of life; while among the higher classes the proportion is only 241 per 1,000, or about half as many.² The difference in the total

¹ See figures given by G. B. LONGSTAFF, *Studies in Statistics* (London, 1891), chap. v, p. 49; also, GEOFFREY DRAGE, "Alien Immigration," in *Journal of the Royal Society of Statistics* (London, 1895), Vol. LVIII, p. 7; and MULHALL, *s. v.* "Emigration." It appears that of late years the emigration from England has decreased, probably, among other reasons, on account of the business depression in this country. It is also to be noticed that between 1881 and 1888, when the population increased fastest, the wave of emigration reached a very high mark (170,000 emigrants—from England alone—in 1888; the annual average between 1853 and 1889 having been 92,950).

² MULHALL, *op. cit.*, *s. v.* "Deaths," p. 177. Still-born children, or those that are born dead, are here included. Among the rich they number 28 per 1,000 dead; among the poor, 53.

mortality of the two classes is still more striking: in Paris, between 1817 and 1836, the annual number of deaths in some districts inhabited by wealthy families was 1 to every 65 persons ; in those parts where the poor dwelt it was 1 to every 15 persons ; that is to say, for every dead rich there were over four dead poor.¹

It is thus evident that, although the reproductive power is not exerted to its full capacity, it is exerted to such extent as to produce more individuals than can, in the present state of society, command the means of full existence. For, obviously, it is to the want of these means that the high mortality among the lower classes is due ; and it is also obvious that the want of these means ultimately reduces itself to insufficient wages — insufficient not only for the complete satisfaction of the wants of every wage-earner, but also, and more especially, for the proper rearing and protection of his children. It can, I think, be stated as a general principle that low wages is the check that in civilized countries keeps population within the means of existence ; and that, as wages rise, if the habits of the people remain unchanged, mortality decreases, and population increases more rapidly ; always, however, being kept within certain limits by one check or another.

It may sound paradoxical and contradictory to speak of a rise in wages, at the same time that it is held that population constantly presses on the means of existence, and that the supply of it tends to be greater than the demand for it (I say *tends*, for in reality the supply is kept nearly within the demand by premature death). But the apparent contradiction is susceptible of a very adequate explanation. Here the law of supply and demand operates in an indirect manner. When a new industry is undertaken, the capitalist does not have his men made to order, as he has his machinery : he pays certain wages, proportionable to the demand for the kind of work he requires. On such wages the well-being of his employés, their facilities for supporting a wife and children, and for keeping them in a more or less comfortable and healthy condition, depend ; in short, the

¹ J. GARNIER, *Du principe de population* (2^{me} édition, Paris, 1885), chap. iii, p. 56

portion of the population devoted to that particular industry will, generally speaking, depend on the wages paid ; and as these wages (I refer, of course, to the low trades and professions, where children usually follow the occupations of their parents) are low, the means of existence they represent are also low, and the supply is kept within the demand by premature mortality. There is thus established an equilibrium between the number of men produced and the number of men required. But, with the constant division of labor, and the creation of new industries, the equilibrium is continually broken in favor of the working classes ; for it usually happens that a new industry, especially if it requires a higher kind of labor, will be obliged, in order to establish itself, to pay higher wages than are already paid by the existing industries ; the result of the competition being a general rise of wages ; and the new wages again determine a new rate of mortality, necessarily lower than the preceding, and the equilibrium is established on a higher level. As a matter of fact, events do not take place with all this distinctness and by successive leaps, but through very small changes and in a rhythmic manner. The law, however, although its operations may not always be clearly discernible, I believe to be as here stated.

It seems to me, then, that some economists and demographers have misinterpreted the facts when they have maintained that population has a "virtual and organic tendency" to keep within the means of existence. In this respect the views of M. de Molinari are worthy of close consideration, as many writers have drawn very liberally from his works, and his explanation of the law of population has been accepted as a death-blow to the "terrible" theories of Malthus. He contends¹ that, from an economic point of view, men are like machines, whose market price depends upon the relation between supply and demand, and the production of which requires a certain amount of labor and capital ; or, in more common language, that the rearing of a

¹ See his *Cours d'économie politique*, 2^{me} éd., t. I, 15^e et 16^e leçons. It is not to be supposed, however, that the "virtual tendency" argument is of contemporaneous origin. It was advanced by Weyland against Malthus, and discussed by the latter in the Appendix to his *Essay* (pp. 513-17).

family requires that the wages of labor should be sufficient, not only for the bare support of the parents, but also for the support of their offspring. This excess of wages represents, he says, the portion of the existing capital that is devoted to the production of workers. As the number of workers increases, a large part of the "available capital" is withdrawn from the production of people; *i. e.*, labor is more scantily remunerated, the result being that the workingman has no longer the means to continue his multiplication; for, there being now no excess of wages available for the purposes of reproduction, or wages being insufficient for the support of a family, the family, as a matter of fact, is not formed: multiplication is thus arrested, until the broken equilibrium is reestablished, without the necessity of such positive checks as those mentioned by Malthus. The reverse phenomenon, of course, takes place when population is scarce: wages are raised, and the laborer is thus enabled to manufacture more articles, that is, more people, and to produce them faster. Both phenomena, Molinari adds, are more striking in such exceptional cases as commercial crises, during which the people, finding themselves without employment, or receiving low wages, immediately cease to multiply, as is attested by the great and abrupt fall in the marriage-rate; and in the opposite case of sudden or rapid industrial improvements, which, calling for a greater number of workers, produce a rise of wages, or an increase in the multiplying power of the population, which also manifests itself in the exceptional elevation of the marriage-rate. Furthermore, he argues that, did population constantly press on the means of existence, it would be an absolute impossibility for it to increase; for in such a case there would be no available capital for the production of men: every man's wages would be what he required for himself alone, and, there being no surplus for the rearing of a family, population would move backward, instead of forward.¹

¹ Molinari's theory, it will be noticed, is nothing but a more elaborate exposition of the action of the prudential check in extreme cases, to which Malthus himself called attention: "When the demand for labor," he says, "is either stationary or increasing very slowly, people, not seeing any employment open by which they can support a family, or the wages of common labor being inadequate to this purpose, will, of course, be deterred from marrying" (*Essay*, Bk. III, chap. xiv, p. 379).

There may be some truth in this theory ; but it neither accounts for all the facts nor can be considered a refutation of Malthusianism. Leaving aside the unwarranted assumption that the prudential check is by itself sufficiently strong to prevent overmultiplication, it must be noticed that, while the theory is a partial explanation of how equilibrium between supply and demand is *established*, or *re-established* when it has been broken by accidental causes, the principal thing to be explained — how that equilibrium is *maintained* — does not seem to have received enough attention. I have already referred to the process by which wages are continually raised through a division of labor, which forms in the industrial world a sort of hierarchy by which the various standards of living and the social stations of men are regulated. He who has been accustomed to do a special kind of work will consider the manner of living he can command with the wages paid in that department of labor as his normal way of living, and the commodities he can procure he will consider indispensable necessities of life. On such wages he will base all his calculations, among which the support of a wife and children is never left out of consideration ; for, no matter what his condition, his standard of living is always of such nature as to include a family among the expenses to be met by his wages, how small soever these may be. But if, by an accidental crisis, his earnings are diminished, he considers that they are no longer enough to supply what, *to him*, are necessities of life ; and if this diminution of wages is only temporary, he will abstain from marrying ; will, that is, *delay* his marriage. This accounts for those falls in the marriage-rate to which M. de Molinari refers, while the corresponding rises are in great part due to the occurrence of delayed marriages. Here we have only a particular case of that general tendency to equilibrium of bodies moving within a certain amplitude of oscillation — what the French call the law of compensation, and is also known as the law of rhythmic motion. But the obvious fact is ignored that equilibrium, or approximate equilibrium, once reestablished, is only maintained through the agency of premature death. M. de Molinari seems to take it for granted that the available capital for the

production of men produces just as many men as are wanted, and no more. Such, indeed, is the case, if by men we understand full-developed individuals — perfect articles for the population market. But these articles are not the only ones produced ; they are the results of many trials, the survivors of many unsuccessful competitors reduced to the required number by the leveling hand of death.

The question whether population so presses on the means of existence as to live on what is strictly necessary to support life is involved in much ambiguity, owing to the character of relativity attaching to any solution of the problem — the diversity of standards by which living is, and can be, judged. If we consider the question in the light of modern civilization, and of the knowledge we possess of the conditions of full existence, it must be admitted that very few, if any, laborers in the world receive for their work what is required for the complete sustenance of life—including abundant and wholesome food, good lodging and clothing, as well as sufficient rest to repair the losses caused by muscular exertion. As, however, man will gratify his sexual instincts, and this usually in marriage, he shares with a family the scanty wages that, even if spent exclusively upon himself, would not meet all the demands of his physiological wants. The members of such a family, being necessarily underfed (using the term “food” in a general sense to include all means of existence), fail, in the majority of cases, of attaining to their complete development. That they do not receive all the necessities of life is plainly shown by their great mortality. How, under these circumstances, population can actually increase is not difficult to understand. For if the means which would support one generation to an average age of thirty years are shared with a new generation, the result will be that both the new and the old generation will, on the average, be more short-lived than they could otherwise have been ; *i. e.*, other things being equal, the working population increases at the expense of the mean duration of life.

It follows, then, that, if we take into account only the number of individuals that attain to a working age, the supply may

be roughly said to keep within the limits of the demand (although this does not exclude the fact that both the supply and the wages are greatly kept down by competition); but if in the supply we include all the individuals produced, it is equally plain that the supply greatly exceeds the demand.

Although the data of experience do not warrant the conclusion drawn from them by some writers — that voluntary checks already exist in a measure sufficient to prevent all redundancy of population; although society is still greatly under the influence of that general biologic law by virtue of which inferior creatures cannot perpetuate their species except by the production of more individuals than can attain to the full development of life; and although much human misery still exists owing to the unavoidable operation of that law; yet there are some facts warranting the induction that, in future generations, reproduction will take place within more and more restricted limits; that the necessities of life will be more efficiently distributed, the demands of full existence more completely satisfied, and much suffering avoided.

Of the causes at work in bringing about this result too much stress has, perhaps, been laid on Spencer's law; the law, namely, that, in proportion as organization develops and the organic demands of the individual become more numerous and intense, a greater portion of energy is consumed in the satisfaction of individual wants, and a smaller portion remains for the purposes of reproduction, the result being that reproduction takes place at a constantly diminishing rate of speed.¹ Regarded simply as "a broad fact" (these are Mr. Spencer's own words), the law seems to be confirmed, both by *a priori* considerations and by the actual facts of the organic world. But it must be remembered that purely biologic laws act, as a rule, with exceeding slowness, and that we can scarcely expect to be able to verify them by such scanty statistical data as are at our disposal. The decreasing birth-rate of civilized countries has been quoted in

¹ It is curious to notice the similarity between this law and the economic law of M. de Molinari. In both cases we have a certain amount of capital devoted to the production of new individuals.

corroboration of the biologic law; but this is not a reliable criterion, as there has been a corresponding diminution in the marriage-rate, and this is to be ascribed to the psycho-economic check, to which I shall presently revert. The only legitimate data that can be used for the purpose under consideration would be found in the marriage-birth rate, *i. e.*, in the number of births per marriage, or the prolificness of marriages at various periods. But even this is a very imperfect guide, owing to the circumstance that unprolificness is very often voluntary—that parents who are naturally fertile restrict the number of their offspring by one means or another. To this must be added that the prolificness of marriages of course depends upon the age of marriage, which seems to be constantly rising. Notwithstanding all these opposing conditions, the prolificness of marriages does not seem to have sensibly decreased during the first three-quarters of the century, and such changes as have occurred of late years can be easily explained by other than biologic and physiologic causes.

The case of France, where prolificness has almost uninterruptedly declined from over four births per marriage, at the beginning of the century, to about three and under, is indeed very remarkable, as in no other country do we notice so rapid and so regular a decrease in the marriage-birth rate. Add to this that the marriage-rate has remained practically constant during the greater part of the century (about 7.9 yearly marriages to every 1,000 inhabitants), and that France is, with the exception of Russia, the country furnishing the largest proportion of women marrying under the age of twenty. This reduced rate of multiplication, joined to the circumstance that the death-rate has not fallen in proportion, has kept the French population practically stationary for a great many years past, and has been the constant preoccupation of French demographers, economists, and moralists. The majority of them, however, and those who have studied the question most thoroughly, seem to be convinced of the voluntary nature of what is by some considered a terrible national calamity.¹ The people, having acquired a deep sense

¹ See E. LEVASSEUR, *La population française* (Paris, 1889-92), t. III, pp. 161, 162, and E. VAN DER SMISSEN, *La population*, p. 418. Levasseur says that "les familles

of independence, and what some deem an excessive love of comfort, are loath to lose their freedom and sacrifice their ease for the supposed duty of preserving the species and giving citizens to the nation; and they either abstain from having any offspring or restrict it within such limits as will permit them to preserve their station in society and the comforts to which they have grown accustomed. In corroboration of this view of the matter attention has been called to the great prolificness of the French population of Canada, which by far exceeds the prolificness of the English. Another fact that may, perhaps, be quoted as pointing in the same direction is that public opinion, far from lamenting the growing infecundity, as if it were a national misfortune, rather considers it the result and expression of wisdom, while for prolificness it has nothing but reproach and derision. "A family of five or six children," says Dr. J. Rochard,"¹ "was once a normal thing; today it is considered a real calamity. The unfortunate parents are not only blamed, but pitied, which is worse; and, what is the worst of all, they are laughed at." To the same effect is M. de Vogüe's ironic remark: "We have children sometimes; that still happens."²

A more significant feature of this acquiescence of the French nation in the voluntary restrictions on multiplication is to be found in the indifference with which, according to some high authorities, abortion and infanticide are regarded. M. Levasseur states that the chances of death are twice as great among illegitimate as among legitimate children, and accepts in part the explanation, given by Bertillon, that illegitimates are purposely killed by parents, especially mothers, either by depriving them

en France n'ont pas beaucoup d'enfants parce qu'elles ne veulent pas en avoir beaucoup," and adds that, "were it necessary to produce testimony, there would be no lack of physicians, trusted with the secrets of the higher classes, to attest the fact." Bertillon, himself a physician, is of opinion that "on peut aujourd'hui en France faire des enfants tout aussi bien qu'en 1856, seulement on en fait moins."

¹ *Hygiène sociale*, p. 322.

² "Les enfants, on en a quelquefois; cela arrive encore" (*Revue des Deux Mondes*, 1^{er} nov. 1889, p. 189). Both this and the preceding quotation are taken from VAN DER SMISSEN, *La population*, p. 392.

of nourishment or by some other means.¹ He also quotes the opinion of several physicians to the effect that abortion is of very frequent occurrence among married women, but is not himself inclined to accept their testimony, adding that the problem is "a mystery" of difficult solution. In this, however, we may feel certain that he is carrying his (may I say *affected*?) incredulity and his "agnosticism" a little too far. The American people may be assumed not to have gone beyond the French in this line of "improvement;" and who would speak of abortion as being "a mystery" in this country? But the circumstance to which I especially wish to call attention is the view the public take of the matter. M. Levasseur himself, referring to the trial of a man whose professional occupation was to bring about miscarriages, remarks, as a "characteristic feature of [French] sentiment" (*trait de mœurs caractéristique*), that neither the accused, who were nineteen in number, nor many of the spectators seemed to attach any seriousness to the act.² And not only the spectators, but the judges themselves, seem to join in the general indifference (or the general approbation), if it be true that, as M. van der Smissen tells us, "the history of crime shows how the number of abortions and infanticides increases through the leniency, and even the connivance, of juries."³

It is, however, difficult to determine with all exactness the extent to which the French unprolificness is entirely voluntary. It is not improbable that the psycho-economic check may react upon the organism and accelerate the physiologic or biologic check. A continued aversion to, and dread of, reproduction, and

¹ LEVASSEUR, *La population française*, t. II, pp. 168-71, 184, where several tables are given. Bertillon's opinion, which M. Levasseur properly qualifies, seems too absolute. Among other causes, shame and poverty must be counted as greatly influencing the mortality of illegitimates, which in all countries by far exceeds that of legitimate children. In Switzerland, out of every 1,000 legitimate children, 77 die under thirty days of age, and 180 under twelve months; for illegitimates the corresponding numbers are 136 and 280. In Saxony, during the six years ending in 1870, the average annual death-rates were 256 and 353 per 1,000 born, for legitimates and illegitimates, respectively; in the city of Dresden the figures were 250 and 705—70 per cent. of the illegitimates died. (MULHALL, s. v. "Deaths," pp. 186, 187.)

² LEVASSEUR, *op. cit.*, t. II, p. 58.

³ *La population*, p. 400.

the habits induced by that aversion and dread, may in the end cause a diminution of fertility. Dr. J. Rochard, quoted above, speaks of the "injustice" of attributing the lack of prolificness of French marriages exclusively to voluntary causes; for it is an actual fact, he says, well known to all physicians, that there are in the cities a great many young couples who eagerly desire to have offspring, but are prevented through absolute barrenness; and he adds that the number of such marriages is constantly on the increase.¹ I would also notice that of the European residents of Algeria the French are the most unprolific, the average number of births per marriage between 1853 and 1876 having been 3.6, while among the German, Italian, and Spanish residents the numbers were 4.8, 5.7, and 6.3, respectively.² Although this may be due to the same voluntary checks prevailing in the mother country, and although the opposite phenomenon is observable in Canada, where the fecundity of French marriages is very great,³ the phenomenon, whatever its cause, is remarkable.

I have dwelt a little at length on the reduced birth-rate in France, as (though we may admit the existence of some real sterility) it is one of the most striking illustrations of the tendency of the psycho-economic check to anticipate the biologic check to overmultiplication. Nor is it unreasonable to believe that, as claimed by M. Leroy-Beaulieu and others, France may be taken in this respect as a type to which advancing civilization tends to reduce all nations. In so far, at least, as the marriage- and birth-rates can be taken as indications of that tendency, the conclusion is fully warranted by statistical data. The following is a table showing the birth- and marriage-rates of various countries for periods differing by intervals of six years; it gives the average yearly marriages and births for every 1,000 inhabitants, and the corresponding ratios of births to marriages:⁴

¹ VAN DER SMISSEN, *La population*, p. 407. In 1856 the number of childless families in France was 15.5 per cent. of the existing families; in 1886 the number had increased to 19.9 per cent. (MULHALL, *s. v.* "Births," p. 94.)

² MULHALL, *s. v.* "Births," p. 98.

³ *Statistical Year-Book of Canada for 1891* (Ottawa, 1892), § 142, p. 102.

⁴ For the construction of this table I have taken the birth- and marriage-rates from the *Bulletin de l'Institut international de Statistique* (Rome, 1894), t. VII, 2^e livraison,

Country	Marriage-rates			Birth-rates			Ratios		
	Years 1865-9	Years 1876-80	Years 1887-91	Years 1865-9	Years 1876-80	Years 1887-91	Years 1865-9	Years 1876-80	Years 1887-91
France	7.89	7.61	7.26	25.9	25.4	23.0	3.3	3.3	3.2
Switzerland	—	7.40	7.11	—	31.3	27.7	—	4.2	3.8
Belgium	7.58	6.90	7.22	31.8	31.9	29.3	4.2	4.6	4.1
England	8.36	7.67	7.51	35.3	35.4	31.3	4.2	4.6	4.2
Germany	—	7.83	7.93	—	39.2	36.5	—	5.0	4.6
Holland	8.10	7.84	7.02	35.1	36.4	33.4	4.3	4.6	4.7
Sweden	6.18	6.58	5.98	30.4	30.2	28.4	4.9	4.6	4.7
Norway	6.45	7.18	6.36	30.3	31.5	30.6	4.7	4.4	4.8
Italy	7.30	7.51	7.59	37.2	36.8	37.6	5.1	4.9	4.9
Austria	8.69	7.74	7.74	37.9	38.8	38.0	4.4	5.0	4.9
Hungary	10.28	9.61	8.64	40.7	44.1	42.8	4.0	4.6	5.0
Ireland	5.29	4.56	4.41	26.4	25.8	22.8	5.0	5.7	5.2

It appears from this table that, in general, marriage has declined very perceptibly in almost all European countries; and, as might naturally be expected, the birth-rate has also fallen with much rapidity. It also appears that in the more civilized countries marriage is less frequent than in the less civilized; a fact due, no doubt, to a superior standard of living, making married life both more difficult and (owing to other and less expensive attractions) less desirable. Such exceptions as Ireland, Sweden, and Norway are easily explained by the great emigration constantly draining those countries of their marriageable population. But the relation appears still more strikingly when we glance at the column of ratios, giving the approximate prolificness of marriages: we see from it that prolificness varies, almost without exception, inversely as the degree of civilization and prosperity;¹ while in some countries, as in Belgium, Switzerland, and England, a notable fall of prolificness is observable; the opposite phenomenon being of rare occurrence, and that in such backward countries as Hungary and Spain. M. Leroy-Beaulieu² has shown from statistical data that, in France and

pp. 5, 17. The ratios I have calculated myself. It is sometimes customary to call these ratios "number of births per marriage." This method, however, of estimating the prolificness of marriages can give only very rough approximations, especially for short periods. (See MALTHUS, *Essay*, Bk. II, chap. xi.)

¹ It must be remembered that England, as I have noticed above, is placed in very exceptional circumstances; yet it stands fourth in the order of increasing (approximate) prolificness.

² *L'Économiste français*, 1892, 2^e vol., pp. 353-6, 385.

Belgium, the departments and provinces where the birth-rate is the greatest are also the poorest and the most ignorant, and those where labor is scantily remunerated. In Germany, he says, instruction is no doubt widely spread, but the people still cling to the religious and political ideas of the dark ages: they have little love of freedom, equality, and independence; and their wages are as low as their aspirations are limited.

Of course, no one acquainted with the great complexity of demographic phenomena would expect the foregoing statements to be more than general conclusions, which must be modified in accordance with the special circumstances and peculiar conditions of different countries.¹

It seems, then, that civilized mankind is solving the population problem on the lines pointed out by Malthus. Although the motives prompting people to this line of conduct, and the means adopted, are not always as "pure" as those advocated by the reverend author of the *Essay*, the bare fact cannot be denied that reproduction is becoming more and more a matter of careful calculation. Nor can it be denied that when these feelings and this conduct become more widely spread among the working classes, their condition will be by far better than it is at present. It is obvious that their unchecked (and effective) exercise of the reproductive power is always accompanied by much misery, arising from the double cause of mortality and competition; for, while some of the children produced are doomed to die of indirect starvation, those who survive become rather the antagonists than the partners, or helpers, of their parents, especially where children are extensively employed. And here I would call attention to a very common opinion, founded on arguments that appear to me erroneous and fallacious. It is claimed that a numerous offspring is burdensome and expensive in their early age only, when the parents, being young and strong, are capable of providing the necessities of life for a large family; that, as the parents advance in age and decline in energy, the children

¹ Thus, in estimating the prolificness of marriages, the age of marriage (usually influenced by the psycho-economic check) is a very important factor to be considered. The marriage-rate, again, is greatly dependent upon the number of persons between the ages of twenty and thirty.

become able to work and add their contingent to the common fund; and that, in proportion as the number of children is greater, the greater are the probabilities that some of them "will count it a privilege to help their parents."¹

Without mentioning the sad but obvious truth that poor parents are seldom supported by their equally poor children, and that where they are so supported their share of the necessities of life is exceedingly meager, and is subtracted from the little larger portion of their children, we must bear in mind, not only the physical and moral evils arising from the employment of very young children, but also the evident circumstance that one reason why parents need help is just because there are too many children in the market, and that the suffering that children are supposed to alleviate has been greatly caused by their very existence. As to the effects of child labor on the children themselves, Malthus, referring to the habit of early marriages and to the employment of children in some manufacturing parishes of Scotland, says that the evil of the too rapid multiplication "is not very perceptible, though humanity must confess with a sigh that one of the reasons why it is not so perceptible is that room is made for fresh families by the unnatural mortality which takes place among the children so employed."² By paying low wages, another writer remarks,³ capitalists oblige women and children to come to the aid of husbands and fathers, and, as the former work for still lower wages (about two-thirds of the wages of adults), the latter are either thrown out of employment or have to work for very scanty salaries. When capitalists have thus succeeded in lowering the wages of adults (this is the testimony of the inspectors of the English factories), they cease to employ children, whose work is naturally of an inferior kind. In some parts of England the proportion of working children to adults has been as 55, and even 60, to 1. At the beginning of the present century about 4,000 children were employed at the

¹ This argument, which is indeed very old, has of late been adduced by REV. R. F. CLARKE, S. J., in an article on "Neo-Malthusianism" (*North American Review*, September, 1896, pp. 350, 351).

² MALTHUS, *Essay*, Bk. II, chap. x, p. 222.

³ F. NITTI, *Population and the Social System*, pp. 136-8.

English factories; of these, only 600 reached the age of thirty; and their sufferings, M. Nitti adds, are evidenced by the occurrence of "something which antiquity never saw, and which is still rare in our day—the suicide of children."

One more subject, intimately connected with the interests of the laboring classes, must here be considered—the question of immigration. Capital, of course, constantly seeks to augment itself at the least possible expense, and, where the number of workers it requires is not cheaply produced, it will import them, thus defeating the good results that the prudent native laborer might have anticipated from his moderation. The argument has been advanced, and statistical data quoted in corroboration thereof, that countries where the birth-rate is low and the population increases slowly or not at all are only making room for the redundant numbers of overpopulated countries, which are ever "ready to pour into the vacant places."¹ In the United Kingdom, where the native population has been growing very rapidly, the number of foreigners has never exceeded 0.006 of the total population, or 6 aliens for every 1,000 inhabitants,² and in Germany the proportion was only 8.8 in 1890; while in France, in the year 1886, there were 30 foreigners per 1,000 population, and in the United States, 143 and 148 in 1880 and 1890, respectively.³ A comparison of the increase of the native and the foreign population in the latter country makes it manifest that, in proportion as immigration has increased, the rate of growth of the native population has been very considerably reduced.⁴

These facts, as said before, seem to show that the population of a country will be fatally kept at a certain level, whether the

¹ G. DRAGE, "Alien Immigration," in *Journal of the Royal Society of Statistics*, 1895, Vol. LVIII, pp. 5, 8.

² The proportions for the years 1841, '51, '61, '71, and '81 were 1.3, 2.3, 3.5, 5.2, and 4.4, respectively. (MULHALL, *s. v.* "Emigration," p. 248.) In 1891 it was, as stated by Mr. Drage, 5.8.

³ G. DRAGE, as above, p. 13.

⁴ See figures given by CARROLL D. WRIGHT in "Lessons from the (1890) Census," in *Popular Science Monthly*, Vol. XL, p. 369, and Vol. XLI, p. 760. Those given by MULHALL (*s. v.* "Population," p. 451) are very different. I do not know the reason for the *exceedingly great* discrepancy. It is to be regretted that Mr. Mulhall's collection of data is somewhat indiscriminate and undigested.

vacant spaces left by death be filled by aliens or natives; and that voluntary checks, far from bettering the condition of the people, rather aggravate their misfortunes, by exposing them to the fierce competition of foreign labor. And the conclusion, of course, is that, unless those checks be universally adopted, their adoption in individual cases, and even in whole nations, will be of little or no avail.

Here again some of the necessary factors of the alleged phenomenon have been overlooked. Evidently the condition of the workman is not better in Italy than in France, nor in Germany than in the United States; and not only it is not better nor equal, but it is by far inferior. This is already presumptive evidence that there must be some flaw in the argument. The source of error is not too recondite to detect. Migration is always directed from those places where labor is lowly remunerated toward those places where labor is highly or less lowly remunerated: the natives of a country will never emigrate to another country where wages are lower than in theirs, or as low as in theirs. And not only must there be some difference in the wages paid, but the difference must be sufficiently great to compensate the emigrant for abandoning his friends, very often his family, and leaving his native land to go among strangers that lead a life entirely different from his own, speak a different tongue, and look down upon him, sometimes with hatred, sometimes with contempt, seldom with sympathy, and more seldom with love. Thus the very occurrence of immigration shows the superior condition of the country where it occurs; and, although it no doubt diminishes the advantages of the prudential check, its effects neither are nor can be sufficient to make that check entirely nugatory. And this without mentioning the fact that, whatever his wages may be (they are never *excessive*), the laborer, by a proper restriction of his multiplication, will secure for himself and his few children (if he has any) a more comfortable and respectable living, and be able to give them a better education, by which they may not only remain at the level of their parents, but rise to higher stations; while, at the same time, he will spare himself and those depending upon him the miseries

of privation, sickness, and death, and often domestic war, which are the ordinary lot of poor families, especially where they are large (and, indeed, it begins to be almost a *contradictio in adjecto* to speak of *large rich* families).

These considerations I advance on rational grounds. Whether the working classes can be *educated* in this direction; whether they are sufficiently advanced to grasp the complex relations of cause and effect in economic and demographic phenomena; and whether it can be expected that they will forego their almost only pleasure, so long as they have no other; or whether we must wait for civilization to do its slow and unconscious work, are questions beyond the scope of this essay.

Although the fate of future generations concerns us very little, I would, before closing this article, add a few considerations which, if it is true that they are of no practical importance to us, are not lacking in interest from a scientific and speculative point of view.

Malthus founded his great theory on the truism that, by the law of our nature, we cannot live without food. Unfortunately, he gave his conclusions a mathematical form, which, having been misunderstood and misinterpreted, has had the effect of making his views distasteful. He, moreover, did not anticipate the vast changes in the production and distribution of food that have taken place in the course of the present century, when the progress of the arts and sciences, and the revolution caused in the industrial world by steam locomotion, have made possible an unparalleled increase of the means of existence, at a rate which by far exceeds his supposed arithmetical progression. Leaving aside the question of the relation that the increase of food has borne to the increase of population, and of how far the one has been influenced by the other, let us glance at the possibilities of the future. Mr. Longstaff remarks that, while our exceptional circumstances have made us neglect, and even scorn, the warnings of Malthus, the coming generations may have to think of him again; for, although we may grant that our descendants will progress with the same rapidity with which we have progressed, "no such marvel is in store as the opening up of the present

western prairies of North America, or the colonization of such an island as Australia."¹

As it is evident that the population of the earth cannot increase beyond the products of the earth, and as the productive capacity of the earth is not unlimited, the time may (it would be rash to say *will*) come when the Malthusian doctrine will have to be faced in all its ugly nakedness. There being, however, two continually increasing obstacles to multiplication—the biologic and the psycho-economic check—it is difficult to foretell whether the equilibrium between food and population will be established by those checks or by the positive check—premature death. At any rate, a fact worthy of notice is that the food production of Europe (Russia and other few backward countries excepted) seems to have reached almost its limit, and that the population is greatly dependent upon importation both for its maintenance and its growth. From a comparison of the actual production of cereals in the year 1880 with calculations made by M. Tousaint Loua in 1868, Dr. V. I. Broch concludes that, while the population of Europe increased by about thirty millions, the grain produce remained almost stationary.² In the particular case of Great Britain, Lord G. Hamilton, after a detailed discussion of the changes in food and population in the United Kingdom between the years 1871 and 1892, concludes "that foreign imported food produce has increased enormously—about 88 per cent.; that the home production of food has been practically stationary; and that the growth of the population during the same period has been at the rate of 20.7 per cent."³ He adds that the population of Ireland, which is self-supporting, is diminishing very rapidly, so that the increase of population takes place in that part of the kingdom depending upon foreign supply. In conclusion he draws an appalling picture of what might happen were England obliged to live on its own resources.

¹ G. B. LONGSTAFF, *Studies in Statistics*, chap. iv, pp. 22, 23.

² "The Agricultural Crisis in Europe," in *Journal of the Royal Statistical Society* (London, 1885), Vol. XLVIII, p. 312.

³ "Ocean Highways," in the above *Journal*, 1894, Vol. LVII, pp. 112, 113, where several tables are given.

How much longer the exporting countries, especially the United States, will be able to supply the European markets, it is, of course, impossible to determine; nor can it be doubted that, in proportion as importation becomes less, greater efforts will be made everywhere, and agriculture will be much improved. As to the adaptation of the population to the means of existence, it seems probable, from the tendencies already manifest in our civilized communities, that the psycho-economic check will grow stronger and act as the main equilibrating force.

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